

CLAIMS

What is claimed is:

1. A method of providing an electronic commerce transaction from the Internet to a
2 telephone using a computer system, the computer system including a telephone interface
3 system coupled in communications with an Internet access system, the telephone interface
4 system being coupled in communications with the telephone, the method comprising:
5 receiving an audio purchase request over the telephone interface system, the audio
6 purchase request corresponding to a product for sale from a merchant, the
7 merchant providing electronic commerce on the Internet using a second
8 computer system;
9 responsive to the audio purchase request, performing the following
10 sending a first request to the second computer system over the Internet access
11 system, the first request corresponding to a request for information about
12 the product,
13 receiving a first response from the second computer system over the Internet
14 access system, the first response corresponding to an information about the
15 product,
16 providing an audio response over the telephone interface system, the audio
17 response corresponding to the information, and
18 receiving an audio confirmation over the telephone interface system; and
19 responsive to the audio confirmation, performing the following
20 sending a second request to the second computer system over the Internet
21 access system, the second request corresponding to a request to purchase
22 the product from the merchant;

23 receiving a second response from the second computer system over the Internet
24 access system, the first response corresponding to a confirmation of the
25 first request; and
26 providing a second audio response over the telephone interface system, the
27 second audio response indicating completion of the electronic commerce
28 transaction.

1 2. The method of claim 1, wherein the telephone interface system receives a
2 telephone identifying information, the method further comprising:
3 accessing a user profile corresponding to the telephone identifying information, the
4 user profile corresponding to information about a user; and
5 including information from the user profile in at least one of the first request and
6 the second request.

1 3. The method of claim 2, wherein the user profile includes at least one of a name, an
2 address, a credit card number, a credit card expiration date, an electronic mail address, and
3 a telephone number.

1 4. The method of claim 2, wherein the user profile includes information obtained
2 from a reverse directory lookup on the telephone identifying information.

1 5. The method of claim 2, further comprising:
2 providing a third audio request over the telephone interface system, the third audio
3 request corresponding to a request for at least one of a name, an address, a
4 credit card number, a credit card expiration date, an electronic mail address,
5 and a telephone number.

6 receiving an audio information response over the telephone interface system, the
7 audio information response corresponding to at least one of a name, an address,
8 a credit card number, a credit card expiration date, an electronic mail address,
9 and a telephone number; and
10 including the corresponding at least one of a name, an address, a credit card
11 number, a credit card expiration date, an electronic mail address, and a
12 telephone number in the user profile.

1 6. The method of claim 2, wherein the second computer system includes a web server
2 providing an HTML order form, and wherein the second request comprises HTML form
3 data corresponding to information from the user profile.

1 7. The method of claim 2, wherein the second computer system includes a web server
2 supporting an HTTP protocol, and wherein the second request comprises data
3 corresponding to information from the user profile sent using the HTTP protocol.

1 8. The method of claim 1, wherein the Internet access system supports access to the
2 second computer system using one or more of a secure sockets layer (SSL) protocol, a
3 hypertext transfer protocol (HTTP), and a secure hypertext transfer protocol (HTTPS).

1 9. The method of claim 8, wherein the second request includes at least one of
2 hypertext markup language (HTML) data and extensible markup language (XML) data
3 sent to the second computer system using HTTPS.

1 10. The method of claim 8, wherein the second computer system includes a web server
2 providing an HTML order form, and wherein the second request comprises HTML form
3 data corresponding to an order for the product.

1 11. The method of claim 1, further comprising responsive to the second response,
2 generating a voice receipt, the voice receipt corresponding to information about the
3 electronic commerce transaction.

1 12. The method of claim 11, wherein the voice receipt includes at least one of a name
2 of the product, a description of the product, a name of the merchant, a contact information
3 for the merchant, a price paid for the product, an order number, a confirmation number,
4 and a status.

1 13. The method of claim 11, wherein the voice receipt includes a status, the status
2 corresponding to information retrieved from the second computer system about the
3 electronic commerce transaction.

1 14. The method of claim 11, further comprising:
2 receiving an audio request, the audio request corresponding to a request to review
3 the voice receipt; and
4 responsive to the audio request, providing a second audio response over the
5 telephone interface, the second audio response corresponding to information
6 from the voice receipt.

1 15. The method of claim 1, wherein the receiving the audio purchase request
2 comprises receiving a verbal request for a product, performing voice recognition on the
3 verbal request to determine the product.

1 16. The method of claim 1, wherein the receiving the audio purchase request
2 comprises receiving a series of one or more touch tone signals and decoding the series of
3 one or more touch tone signals to determine the product.

1 17. The method of claim 1, wherein the receiving the audio purchase request
2 comprises receiving a verbal request for a merchant, performing voice recognition on the
3 verbal request to determine the merchant.

1 18. The method of claim 1, wherein the receiving the audio purchase request
2 comprises receiving a series of one or more touch tone signals and decoding the series of
3 one or more touch tone signals to determine the merchant.

1 19. A method of providing an electronic commerce transaction from the Internet to a
2 telephone using a computer system, the computer system including a telephone interface
3 system coupled in communications with an Internet access system, the telephone interface
4 system being coupled in communications with the telephone, the method comprising:
5 receiving an audio request over the telephone interface system, the audio request
6 corresponding to a product for sale from a merchant, the merchant providing
7 electronic commerce on the Internet using a second computer system;
8 responsive to the audio request, performing the following
9 sending a first request to the second computer system over the Internet access
10 system, the first request corresponding to a request for information about
11 the product,
12 receiving a first response from the second computer system over the Internet
13 access system, the first response corresponding to an information about the
14 product,
15 providing an audio response over the telephone interface system, the audio
16 response corresponding to the information, and
17 receiving a confirmatory audio request over the telephone interface system; and

18 responsive to the confirmatory audio request, performing the following
19 sending a second request to the second computer system over the Internet
20 access system, the second request corresponding to a request to purchase
21 the product from the merchant;
22 receiving a second response from the second computer system over the Internet
23 access system, the first response corresponding to a confirmation of the
24 first request; and
25 *put* providing a second audio response over the telephone interface system, the
26 *as* second audio response indicating completion of the electronic commerce
27 transaction.

1 20. The method of claim 19, wherein the telephone interface system receives a
2 telephone identifying information, the method further comprising:
3 accessing a user profile corresponding to the telephone identifying information, the
4 user profile corresponding to information about a user; and
5 including information from the user profile in at least one of the first request and
6 the second request.

1 21. The method of claim 20, wherein the user profile includes at least one of a name,
2 an address, a credit card number, a credit card expiration date, an electronic mail address,
3 and a telephone number.

1 22. The method of claim 20, wherein the user profile includes information obtained
2 from a reverse directory lookup on the telephone identifying information.

1 23. The method of claim 20, further comprising:

2 providing a third audio request over the telephone interface system, the third audio
3 request corresponding to a request for at least one of a name, an address, a
4 credit card number, a credit card expiration date, an electronic mail address,
5 and a telephone number;
6 receiving an audio information response over the telephone interface system, the
7 audio information response corresponding to at least one of a name, an address,
8 a credit card number, a credit card expiration date, an electronic mail address,
9 and a telephone number; and
10 including the corresponding at least one of a name, an address, a credit card
11 number, a credit card expiration date, an electronic mail address, and a
12 telephone number in the user profile.

1 24. The method of claim 20, wherein the second computer system includes a web
2 server providing an HTML order form, and wherein the second request comprises HTML
3 form data corresponding to information from the user profile.

1 25. The method of claim 20, wherein the second computer system includes a web
2 server supporting an HTTP protocol, and wherein the second request comprises data
3 corresponding to information from the user profile sent using the HTTP protocol.

1 26. The method of claim 19, wherein the Internet access system supports access to the
2 second computer system using one or more of a secure sockets layer (SSL) protocol, a
3 hypertext transfer protocol (HTTP), and a secure hypertext transfer protocol (HTTPS).

1 27. The method of claim 26, wherein the second request includes at least one of
2 hypertext markup language (HTML) data and extensible markup language (XML) data
3 sent to the second computer system using HTTPS.

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1 28. The method of claim 26, wherein the second computer system includes a web
2 server providing an HTML order form, and wherein the second request comprises HTML
3 form data corresponding to an order for the product.

Pat B3
1 29. A computer system to provide an electronic commerce transaction from the
2 Internet to a telephone, the computer system comprising:
3 an Internet interface including at least one program to access a second computer
4 system using one or more of a SSL protocol, a HTTP, and a HTTPS;
5 a telephone interface to send and receive audio signals to and from the telephone
6 and to receive a telephone identifying information corresponding to the
7 telephone; and
8 a control subsystem to control the Internet interface and the telephone interface, the
9 control subsystem including at least one program for
10 processing an audio request to purchase a product from a merchant, the
11 merchant providing electronic commerce on the Internet using the second
12 computer system, and
13 completing the electronic commerce transaction for the product with the
14 merchant over the Internet interface responsive to an audio confirmation.

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1 30. The computer system of claim 29, wherein the at least one program in the control
2 subsystem further for accessing a user profile corresponding to the telephone identifying
3 information, the user profile corresponding to information about a user and wherein the
4 completing further comprises providing at least a portion of the user profile to the
5 merchant over the Internet interface.

03 31. The computer system of claim 29, wherein the at least one program in the control subsystem further for generating a voice receipt responsive to the completing, the voice receipt corresponding to information about the electronic commerce transaction.

Pat B2 32. A computer system performing an electronic commerce transaction over a telephone, the computer system receiving a telephone identifying information associated with the telephone, the electronic commerce transaction performed over the Internet, the computer system comprising:

means for receiving an audio request to initiate the electronic commerce transaction;

means for selecting a product from a merchant using an audio dialogue, the merchant providing electronic commerce on the Internet using a second computer system;

means for receiving audio confirmation of the electronic commerce transaction of the product; and

means for completing the electronic commerce transaction over the Internet with the second computer system.

33. The computer system of claim 32, wherein the means for completing further comprises:

means for accessing a user profile corresponding to the telephone identifying information, the user profile corresponding to information about a user;

03 means for providing at least a portion of the user profile to the second computer system over the Internet to complete the electronic commerce transaction.

1 34. The computer system of claim 32, further comprising means for providing a voice
2 receipt of the electronic commerce transaction, the voice receipt corresponding to a record
3 of the electronic commerce transaction.

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1 35. The computer system of claim 32, wherein the means for selecting comprises:
2 means for comparing prices for the product at a plurality of merchants;
3 means for providing a list of a predetermined number of merchants from the
4 plurality of merchants over the telephone, the predetermined number of
5 merchants offering the product at a lower price than other merchants in the
6 plurality of merchants; and
7 means for receiving an audio selection of one of the merchants in the list, the
8 selection corresponding to the merchant.

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1 36. A method of ordering an item over a telephone, the telephone coupled to a
2 computer system by a telephone interface, the computer system supporting access to an
3 Internet for completing commerce transactions, the method comprising:
4 presenting information about the item in audio format over the telephone interface
5 using the computer system; and
6 responsive to a single audio response received by the computer system over the
7 telephone interface:
8 retrieving telephone identifying information associated with the telephone to
9 identify a profile associated with the purchaser; and
10 sending a request to order the item, the request including information from the
11 profile about the purchaser to a second computer system on the Internet, the
12 second computer system operated by a merchant selling the item.

1 37. The method of claim 36, wherein the request is sent to the second computer system
2 over the Internet using a secure hypertext transfer protocol (HTTPS) and the request
3 includes a payment identifier from the user profile.

1 38. The method of claim 36, wherein the profile includes at least one of a name, an
2 address, a credit card number, a credit card expiration date, an electronic mail address, and
3 a telephone number.

1 39. The method of claim 36, wherein the profile includes information obtained from a
2 reverse directory lookup on the telephone identifying information.

1 40. The method of claim 36, wherein the second computer system includes a web
2 server providing an HTML order form, and wherein the request to order the item
3 comprises HTML form data corresponding to information from the profile.

1 41. The method of claim 36, wherein the second computer system includes a web
2 server supporting an HTTP protocol, and wherein the request to order the item comprises
3 data corresponding to information from the profile sent using the HTTP protocol.

1 42. The method of claim 36, wherein computer system communicates with the second
2 computer system over the Internet using one or more of a secure sockets layer (SSL)
3 protocol, a hypertext transfer protocol (HTTP), and a secure hypertext transfer protocol
4 (HTTPS).

1 43. The method of claim 42, wherein the request to order the item includes at least one
2 of hypertext markup language (HTML) data and extensible markup language (XML) data
3 sent to the second computer system using HTTPS.

1 44. The method of claim 42, wherein the second computer system includes a web
2 server providing an HTML order form, and wherein the request to order the item
3 comprises HTML form data corresponding to an order for the product.

1 45. The method of claim 36, further comprising after the request to order the item,
2 generating a voice receipt, the voice receipt corresponding to information about the order
3 of the item.

1 46. The method of claim 45, wherein the voice receipt includes at least one of a name
2 of the item, a description of the item, a name of the merchant, a contact information for the
3 merchant, a price paid for the item, an order number, a confirmation number, and a status.

1 47. The method of claim 45, wherein the voice receipt includes a status, the status
2 corresponding to information retrieved from the second computer system about the order
3 of the item.

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1 48. A method of completing a purchase of an item over a telephone, the telephone
2 coupled to a first computer system by a telephone interface, the first computer system
3 supporting access to an Internet, the method comprising:
4 receiving a signal from a second computer system over the Internet, the signal
5 corresponding to a request to place a telephone call to a user at a telephone
6 number to complete the purchase of the item;
7 calling the user over the telephone at the telephone number using the telephone
8 interface using the first computer system;
9 conducting an audio dialogue over the telephone interface with the user using the
10 first computer system to obtain at least one of a name, an address, a credit card

11 number, a credit card expiration date, an electronic mail address, a telephone
12 number, a confirmation of the purchase, and a password; and
13 completing the purchase of the item by sending a message to the second computer
14 over the Internet, the message including at least a portion of personal
15 identifying information obtained in the audio dialogue.

13 1 49. The method of claim 48, wherein the conducting the audio dialogue comprises:
2 identifying a user profile associated with the telephone number;
3 making an audio request, the audio request corresponding to a request for a
4 password from the user;
5 receiving an audio response, the audio response corresponding to a password from
6 the user; and
7 wherein the completing occurs responsive to verification of the password provided
8 by the user against the password in the user profile.

13 2 50. A method of completing a purchase from a list over a telephone, the telephone
3 coupled to a first computer system by a telephone interface, the telephone supplying
4 telephone identifying information to the first computer system over the telephone
5 interface, the first computer system supporting access to an Internet, the list including a
6 plurality of items, the method comprising:
7 identifying a user profile associated with the telephone identifying information;
8 using the computer to present each of the plurality of items in the list over the
9 telephone interface; and
10 responsive to an audio response, completing a purchase of a most recently
11 presented item on a second computer system coupled in communication with
the first computer system over the Internet using the user profile.

C3 1 51. The method of claim 50, wherein a pause of a predetermined amount of time is
2 inserted between the presentation of each item.

2/16/87 1 52. A method of storing information received over a telephone interface in a data
storage coupled to a computer, the telephone coupled to the computer by a telephone
3 interface, the method comprising:
4 using the computer to prompt a user for information over the telephone interface;
5 receiving an audio signal over the telephone interface;
6 sending the audio signal from the computer to an audio interface, the audio
7 interface for presenting the audio signal to a human;
8 receiving a data signal on the computer, the data signal corresponding to a speech
9 recognition result for the audio signal by a human; and
10 responsive to receiving the data signal, updating the data storage to include the
11 speech recognition result.

C3 1 53. The method of claim 52, wherein the speech recognition result indicates that the
2 human could not process the audio signal, the method further comprising repeating the
3 method until the speech recognition result no longer indicates that the human could not
4 process the audio signal.